Washington State Department of Transportation

Washington State Ferries

Washington State Ferries
Clean Fuel Initiatives
Background Information

In alignment with the Governor's Executive Order 02-03 (Sustainable Practices by State Agencies) and Washington State Ferries' (WSF) Strategic Business Plan and Safety and Environmental Protection Policy, WSF is committing to take the following actions to improve air emissions from our fleet. Specifically, WSF's Clean Fuel Initiatives consists of the following activities:

1. **Convert The Entire WSF Fleet To Low Sulfur Diesel**

   Within the next year, we will convert WSF's entire ferry fleet to run on low sulfur diesel fuel. Converting to low sulfur diesel fuel will eliminate 90% of the sulfur dioxide emissions and at least 30% of the particulate emission from our fleet. We anticipate that the incremental cost increase for this fuel, on average, will be less than $0.01 per gallon. Converting to low sulfur diesel will eliminate the following emissions from our fleet annually:

   - 412 tons of sulfur dioxide
   - 75 tons of particulate matter (PM 10 and PM 2.5)

2. **Continue To Work To Conserve Diesel Fuel**

   WSF will continue to pursue operational efficiencies that will conserve diesel fuel. For several years, WSF has been making long-term investments to conserve fuel by buying increasingly fuel-efficient, cleaner-burning engines and equipment for our vessels. And in 2002, as we implemented our strategic business plan, we made operational and schedule changes that resulted in the conservation of substantial quantities of fuel, including the elimination of passenger-only ferry service to Bremerton. As a result, in 2003 WSF conserved approximately 767,000 gallons of diesel fuel; approximately 4% of our total fuel volume. This action saved approximately $750,000 and eliminated the following emissions from our fleet:

   - 8858 tons of carbon dioxide
   - 160 tons of nitrogen oxide
   - 23 tons of carbon monoxide
   - 19 tons of sulfur dioxide
   - 10 tons of particulate matter (PM 10 and PM 2.5)
   - 9 tons of volatile organic compounds
   - 1 ton of methane

3. **Complete A Long-Term Pilot Test Of Biodiesel (B20)**

   Biodiesel is a renewable fuel that can be made from virgin or recycled vegetable oils, animal fats or waste restaurant grease. Biodiesel helps to mitigate greenhouse gas emissions. B20 is a blend of 20% biodiesel and 80% low sulfur petroleum diesel fuel. With funding from Seattle City Light's Greenhouse Gas Mitigation Program, WSF will initiate a year-long pilot test of B20 on the "Triangle Route" between Fauntleroy, Southworth, and Vashon Island. The three WSF vessels assigned to this route (the M/V Issaquah, the M/V Klahowya, and the M/V Tillikum) will use B20 exclusively over a one-year period. The three vessels will burn a total of 1.5 million gallons of this fuel blend during the test. Completing this pilot test will help WSF understand whether our marine diesel engines can effectively burn this fuel over the long-term and will eliminate the following emissions:

   - 2793 tons of carbon dioxide (life cycle credit)
   - 1 ton of sulfur dioxide
   - 1 tons of particulate matter (PM 10 and PM 2.5)

   - This pilot test will increase nitrogen oxide emissions by 9 tons (approximately 2%).

4. **Pilot Test The Use Of Ultra-Low Sulfur Diesel (ULSD) Fuel**
   With funding from the Environmental Protection Agency (EPA) Region X and the Puget Sound Clean Air Agency, WSF will initiate a year-long pilot test of ULSD on the M/V Elwha. The M/V Elwha burns approximately 1.3 million gallons of fuel annually on her route from Anacortes through the San Juan Islands. Completing this pilot test will help WSF understand whether our marine diesel engines can effectively burn ULSD over the long-term and will eliminate the following emissions:

   - 3 tons of sulfur dioxide
   - Approximately 0.5 tons of particulate matter (PM 10 and PM 2.5)

We are proud of our commitment to reduce air emissions from our fleet and pleased to have the support of so many organizations as we move forward with this important initiative.

For further information on this initiative, contact Tina Stotz, WSF Environmental Manager, at (206) 515-3827.

Prepared by WSF Corporate Communications
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